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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/913,791	08/16/2001	Nobuhiko Kenmochi	110215	4112
25944	7590	06/08/2005	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			DEPPE, BETSY LEE	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/913,791

Applicant(s)

KENMOCHI, NOBUHIKO

Examiner

Betsy L. Deppe

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2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 28 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 2-3, filed February 28, 2005, with respect to the rejection(s) of claim(s) 1-6 under 35 USC 102 and 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Warren et al. (US Patent No. 5,946,344) and Ovens et al. (US Patent No. 5,381,455).

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "19" on page 6, line 25 is not shown in Figure 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawing correction to Figure 4 received on August 16, 2001 is approved.

Claim Objections

3. Claim 3 is objected to because of the following informalities: on line 18, "either" should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 3-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. In claim 3, it is unclear whether the limitations recited on lines 5-17 are part of the digital filter or the n-stage shift register on lines 2-4. Dependent on claim 3, claim 4 is rejected under the same ground.
7. In claim 5, lines 10-13 is inconsistent with the limitations recited on lines 6-9. Lines 6-9 suggest that the correlation section provides the "received data" to the baseband demodulation section since the correlation section "output[s] received data" and the baseband demodulation section demodulates "the received data." Lines 10-13 recites connecting the output of the baseband demodulation to the input of the correlation section thereby contradicting lines 6-9 and rendering the claim vague and indefinite.
8. Similarly, in claim 6, lines 12-14 are inconsistent with the limitations recited on lines 6-9. Lines 6-9 suggest that the correlation section provides the "received data" to

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the baseband demodulation section since the correlation section "output[s] received data" and the baseband demodulation section demodulates "the received data." Lines 12-14 recites connecting the output of the baseband demodulation section to the input of the correlation section thereby contradicting lines 6-9 and rendering the claim vague and indefinite.

9. In claim 6, line 15, it is unclear how the packet processing section is connected to the correlation section and/or the baseband demodulation section.

Claim Rejections - 35 USC § 102

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 1, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Warren et al. (US Patent No. 5,946,344).

12. With regard to claim 1, Figure 2 of Warren et al. discloses the claimed invention including an n-stage shift register (12) in which the output of each stage is multiplied (by 22_M) by a filter coefficient (M) and added (24). (See column 4, lines 41-54) Warren et al. also teaches driving each divided shift register in synchronization with the input data. (See column 4, lines 12-15)

13. With regard to claim 5, Warren et al. discloses the claimed invention including an RF receiving section, a correlation section and a baseband demodulation section

wherein the correlation section includes the match filter of claim 1. (See Warren et al., column 3, lines 45-56)

14. With regard to claim 6, Warren et al. discloses the claimed invention including an RF receiving section, a correlation section, a baseband demodulation section and a packet processing section wherein the correlation section includes the match filter of claim 1. (See Warren et al., column 1, lines 42-66 and column 3, lines 45-56)

Claim Rejections - 35 USC § 103

15. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

16. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Warren et al. in view of Ovens et al. (US Patent No. 5,381,455 cited in the Office Action mailed January 7, 2005). Warren et al. discloses the claimed invention including an n-stage shift register having a predetermined number of bits and in which the output of each stage is multiplied (by 2^{2M}) by a filter coefficient (M) and added (24). (See column 4, lines 41-54) However, Warren et al. does not disclose dividing the n-stage shift register into a first and second shift register with one of the shift registers shifting at a rising edge of a clock signal and the other shift register shifting at a falling rising edge of the clock signal.

Ovens et al. discloses an n-stage shift register that is an interleave shift register that divided into a first and second shift register with one of the shift registers shifting at

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a rising edge of a clock signal and the other shift register shifting at a falling rising edge of the clock signal. (See Figures 1 and 2; column 2, line 67 - column 2, line 3; and column 2, lines 30-48) It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Ovens et al. with that of Warren et al. in order to increase operating speed without an appreciable increase in power consumption. (See Ovens et al., column 1, lines 49-55)

Allowable Subject Matter

17. Claims 3 and 4 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betsy L. Deppe whose telephone number is (571) 272-3054. The examiner can normally be reached on Monday, Wednesday and Thursday (8:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272 - 2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Betsy L. Deppe
Primary Examiner
Art Unit 2637

Approved

BD 6/3/05

09/913791
531 Rec'd PCT 16 AUG 2001

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Nobuhiko KENMOCHI

Application No.: U.S. National Stage of PCT/JP00/08980

Filed: August 16, 2001

Docket No.: 110215

For: NONRECURSIVE DIGITAL FILTER AND RADIO RECEIVING UNIT USING
THE SAME

REQUEST FOR APPROVAL OF DRAWING CORRECTIONS

Director of the U.S. Patent and Trademark Office
Washington, D.C. 20231

Sir:

The Examiner is requested to review and approve the proposed corrections to
Figure 4, marked in red on the attached copy of such drawing figure.

Upon approval by the Examiner, and upon allowance of this application, the formal
drawings will be corrected.

Respectfully submitted,

James A. Oliff
Registration No. 27,075

Eric D. Morehouse
Registration No. 38,565

JAO:EDM/zmc

Date: August 16, 2001

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